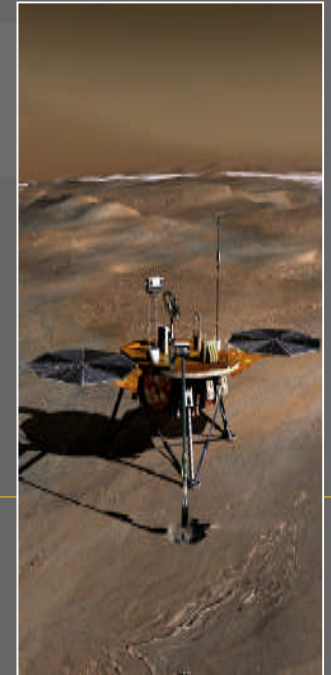
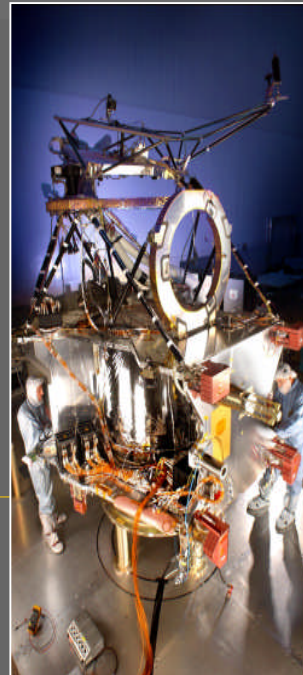
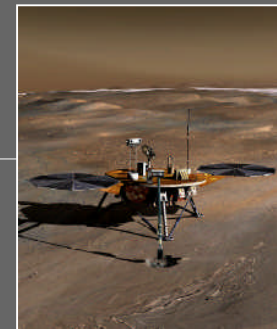
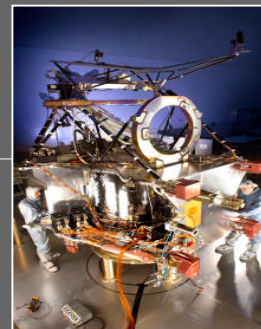


# Doing Business With JPL

Andre Stefanovich  
Manager, Flight, Project & Program  
and University Subcontracts Sections  
Jet Propulsion Laboratory



# JPL Overview

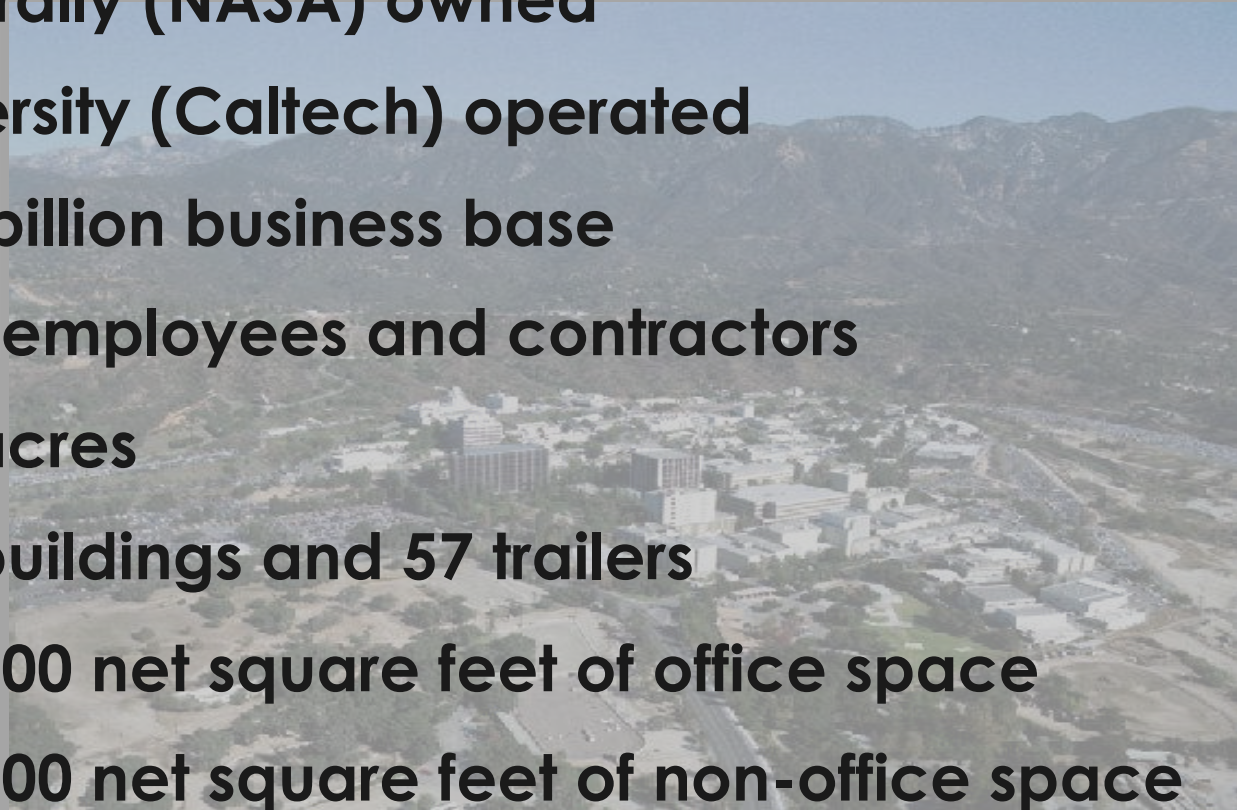


# The Jet Propulsion Laboratory



# Background

- Federally (NASA) owned
- University (Caltech) operated
- \$1.5 billion business base
- 5000 employees and contractors
- 177 acres
- 134 buildings and 57 trailers
- 670,000 net square feet of office space
- 860,000 net square feet of non-office space



# Our Roles in the Competitive NASA

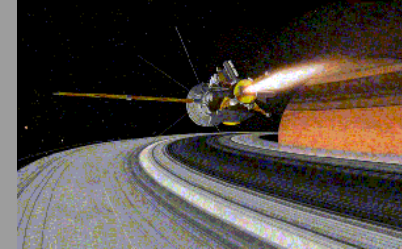
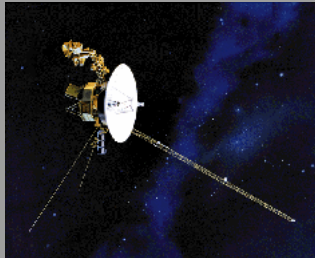
- JPL competes for its missions, just like industry
- NASA issues requirements, Announcement of Opportunities (AO), which JPL competes for along with other organizations, e.g.:
  - ✦ Discovery;
  - ✦ New Frontiers; or
  - ✦ Explorer class missions
- JPL tries to implement one or more missions in-house at all times, to maintain our skill base

# 17 spacecraft and 5 instruments across the solar system.



Spitzer studying stars and galaxies in the infrared

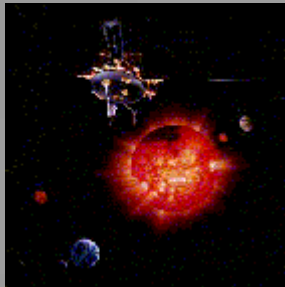
Two Voyagers on an interstellar mission



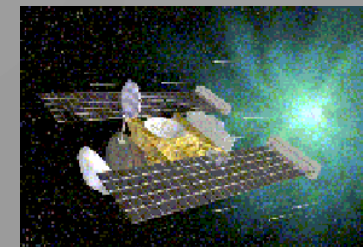
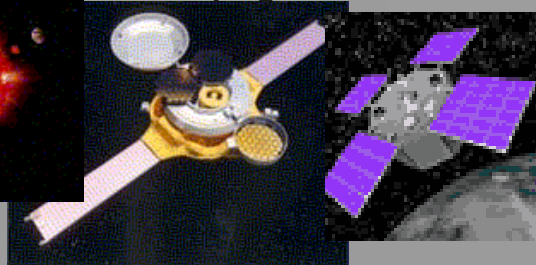
Cassini studying Saturn



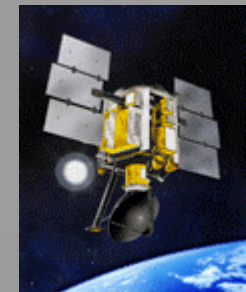
GALEX studying UV universe



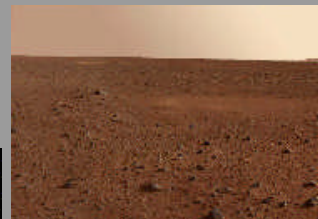
Ulysses and ACRIMSAT  
studying the sun



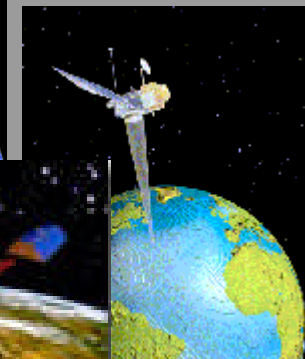
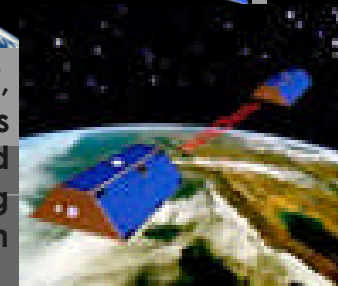
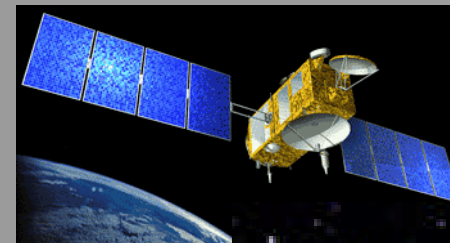
Stardust and Deep Impact  
returning comet dust



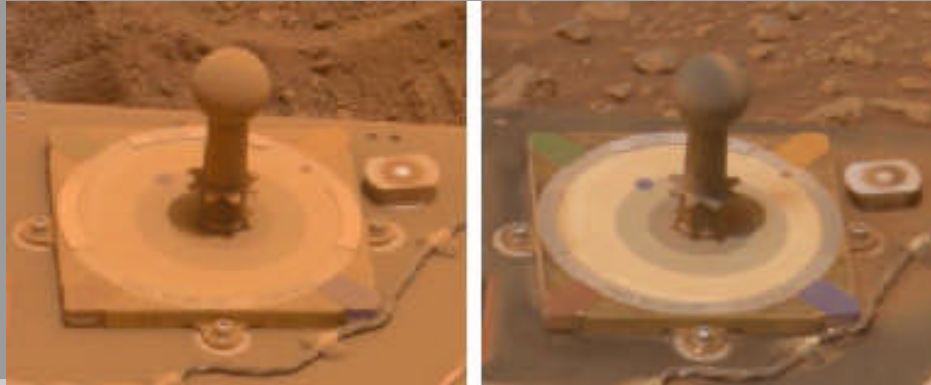
Mars Global Surveyor and Mars  
Odyssey orbiters; "Spirit" and  
"Opportunity" on Mars



Topex/Poseidon, QuikSCAT,  
Jason 1, and GRACE (plus  
ASTER, MISR, AIRS, MLS and  
TES instruments) monitoring  
Earth



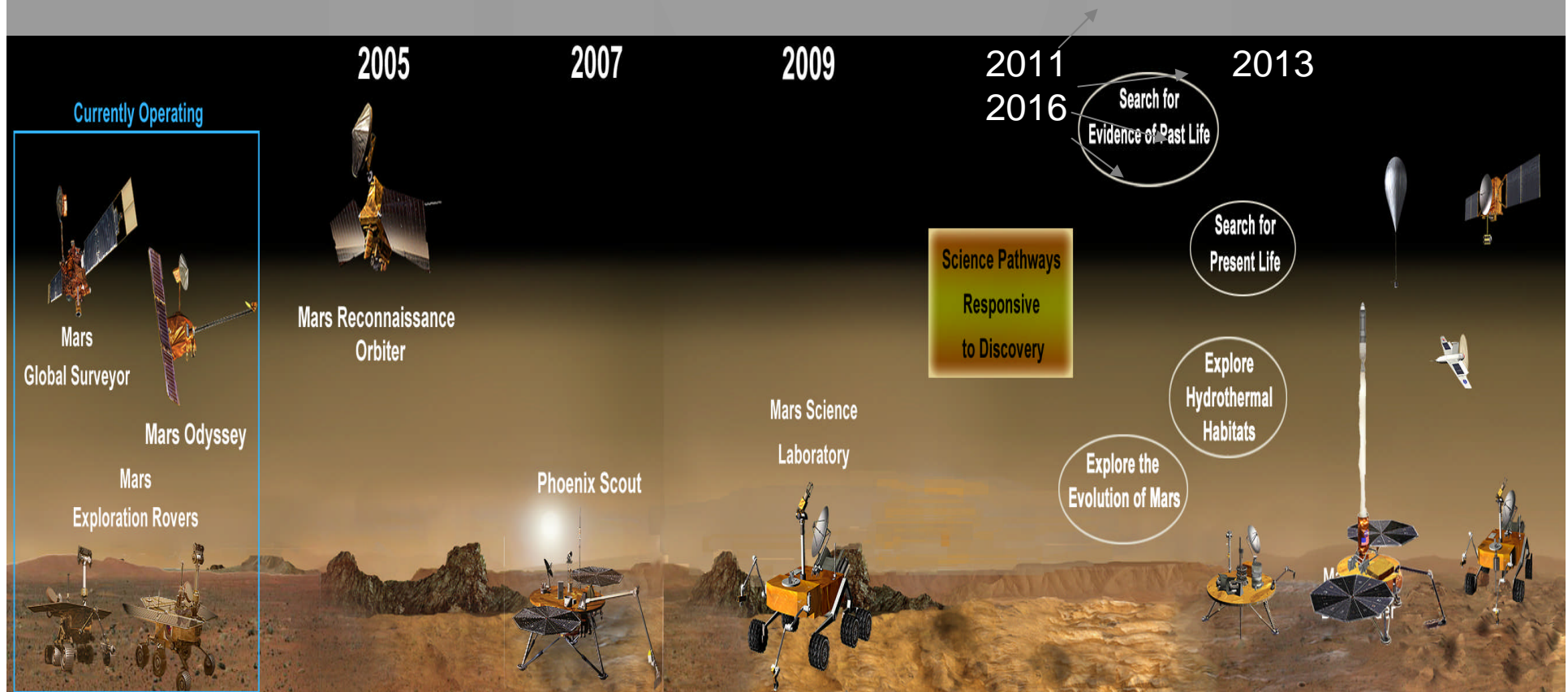
# Mars Exploration Rovers in “seventh lifetime”



Dust devils as seen by *Spirit*, and *Spirit* surface before and after a “cleaning” event.

# Mars Exploration Program

(2011 and beyond options under study)



# Missions Under Development for Launch

## **Mars Phoenix polar lander ('07)**

- Lockheed Martin Civil Space Systems, Denver, CO

## **Kepler ('08)**

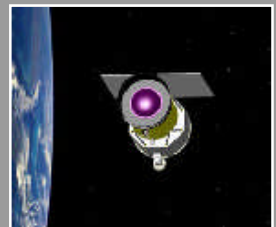
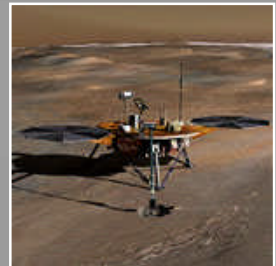
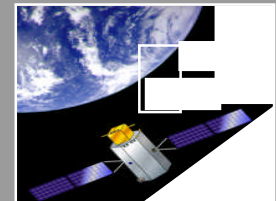
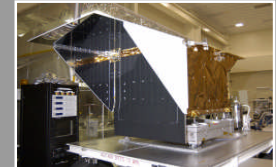
- Ball Aerospace, Boulder, CO

## **Orbiting Carbon Observatory ('08)**

- Hamilton Sundstrand, Pomona, CA
- Orbital Sciences Corporation, Dulles, VA

## **Ocean Surface Topography Mission ('08)**

- Subcontracting opportunities available



# Missions Under Development for Launch

## Wide-Field Infrared Survey Explorer (WISE) ('09)

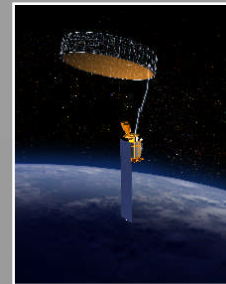
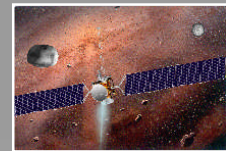
- Ball Aerospace, Boulder, CO
- Utah State Univ. Research Foundation/SpaceDynamics Lab (SDL)

## Mars Science Laboratory (MSL) ('09)

- In-house build

## NuSTAR ('09)

- General Dynamics C4 Systems, Gilbert, AZ



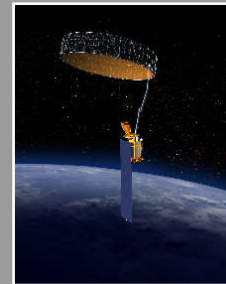
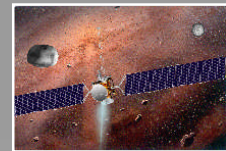
# Missions Under Development for Launch

## **JUNO ('10)**

- Lockheed Martin, Denver, CO

## **Space Interferometry Mission (SIM) ('11/15)**

- Northrop Grumman Space Technology, El Segundo CA



# Major Instruments Under Development

## **Mars Science Laboratory (MSL) ('09)**

- In-house build; subcontracting opportunities available

## **NUSTAR ('09/10)**

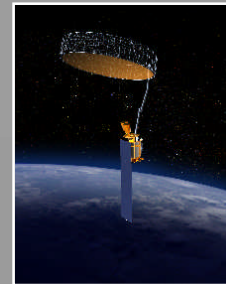
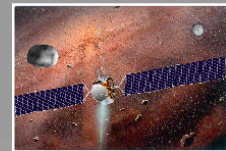
- General Dynamics C4 Systems, Gilbert, AZ

## **JUNO ('10)**

- Lockheed Martin, Denver CO

## **Space Interferometry Mission (SIM) ('11/15)**

- Northrop Grumman Space Technology, El Segundo, CA



# Large Service Providers

## **Lockheed Martin Information Technology (LMIT), Pasadena, CA**

- PC/MAC hardware and services

## **Raytheon, Pasadena CA**

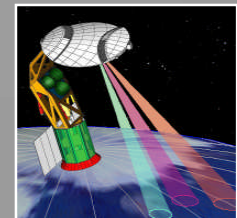
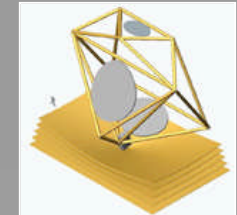
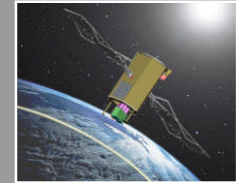
- Scientific data systems and analysis

## **Computer Science Corporation (CSC), Pasadena, CA**

- Network infrastructure

## **All Star Service, San Diego, CA**

- Facility maintenance and operations



# Large Service Providers

## **Ball Aerospace, Boulder, CO**

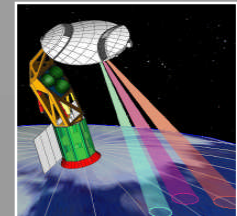
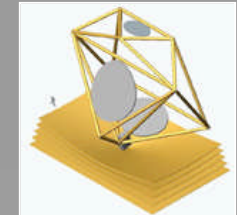
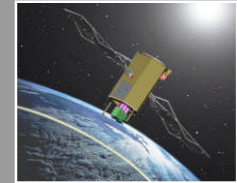
- Flight, instrument and subsystem tasks

## **Northrop-Grumman, Falls Church, VA**

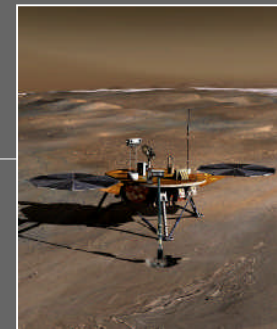
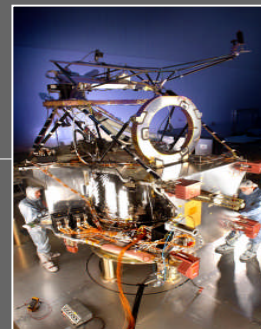
- Engineering technical and modeling, engineering support software maintenance and operations

## **Swales Aerospace, Beltsville, MD**

- Mechanical and thermal engineering



# Buying at JPL



# What do we buy?

Spacecraft  
Spacecraft Subsystems &  
Assemblies  
Spacecraft Instruments &  
Science Investigations  
R&D Studies/Hardware  
Technology & Application  
Programs

Commodities of all types  
Computer  
hardware/software  
Subcontracted Support  
Services  
Facilities Construction



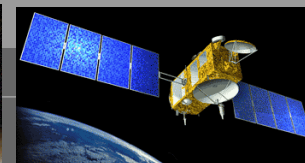
# How do we buy it?

- Letter of Interest/Request for Information
- RFQs/RFPs
- Unsolicited Proposals
- Low bid
- Evaluated selection
- P-Cards
- Commercial Items/Service Purchase Orders



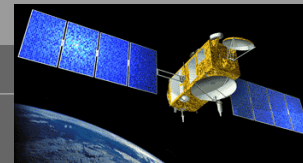
# How do we buy it? (continued)

- Blanket Agreements
- GSA Schedules
- E-Commerce/JIT
- Wide Range of Subcontracts:
  - Labor Hour/T&M
  - Fixed-Price
  - Cost-Reimbursable
- Fixed Fee, Award Fee, Incentive Fee, Award Term

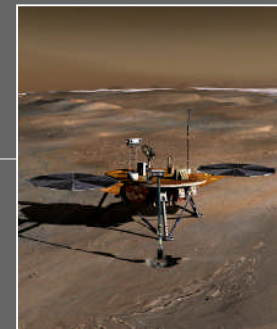
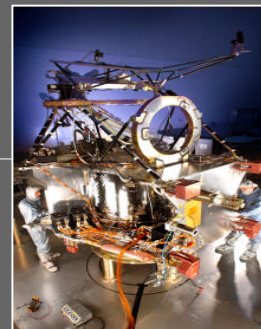


# Business Opportunities

- Explore all options
  - Prime
  - Subcontractor
  - Mentor Protégé
  - Team Member
- Get on bidders list
- Give a product demonstration
- Schedule a meeting with potential customer
- Contact cognizant Acquisition group



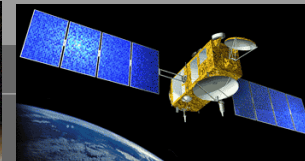
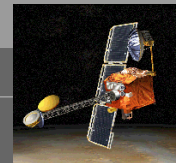
# JPL's Proposal Process



# Should I Propose?

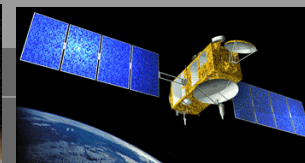
Thoroughly review and analyze the Request for Quotation/Proposal (RFQ/RFP)

- Are there minimum/mandatory requirements?
  - ✦ Don't bid if you can't meet the minimum requirements
- Identify requirement challenges. Can you successfully perform the job? If you need more information, ask questions!
- Do you have any concerns meeting:
  - Work Scope
  - Delivery Schedule
  - Budget Constraints
  - Terms & Conditions



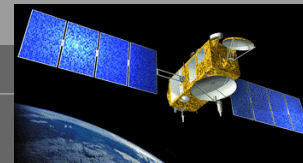
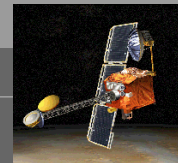
# Should I Propose? (continued)

- Can you offer a competitive price/cost?
- Any past performance issues?
- Assess your potential competition
- Understand the evaluation factors and their relative importance:
  - Technical
  - Management
  - Cost or price
  - Financial capability
  - Past performance



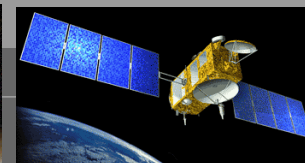
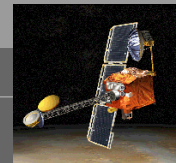
# Should I Propose? (continued)

- Attend the pre-proposal conference. May include:
  - Q&A sessions
  - Job Walk
  - Observation of on-going operations
  - Overview of the Project



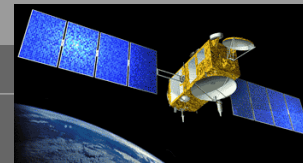
# Successful Proposal Preparation

- Review proposal instructions carefully.
- Establish a schedule. Allow time for:
  - Graphics, printing, reproduction, shipment
  - Revision of cost/price to reflect technical/management changes
  - Vendor/subcontractor quotes & proposals
  - Management/legal review
- Identify critical requirements and brainstorm cost-effective solutions.
- Establish a proposal team:
  - Accountable leader
  - Specialists for evaluation factors and compliance topics



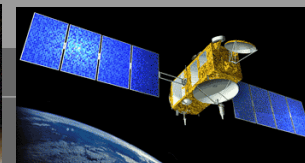
# Successful Proposal Preparation

- Create a “compliance matrix” listing every requirement in statement of work and specification. Do you exceed, meet, or fail to meet any requirement?
  - Don’t meet = Don’t bid
  - If you exceed, does the cost of exceeding make sense
- Create a proposal theme:
  - “Leading experts in the country”
  - “Highest reliability”
  - “Low life cycle cost”



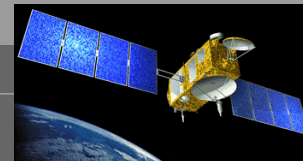
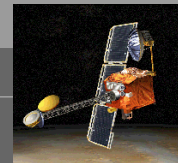
# Successful Proposal Preparation (cont.)

- Format the proposal to match the proposal instructions.
  - *Include Table of Contents*
  - *Put the material in the volume/section specified*
  - *Comply with page limitations*
  - *Compliance matrices should cross-reference the WBS, paragraphs in the specification, etc.*
- Control solicitation period communications
  - *Single point of contact*
  - *Clear paper trail*
- Respond to every instruction and requirement



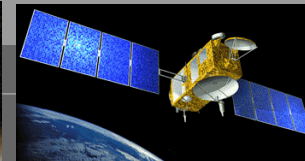
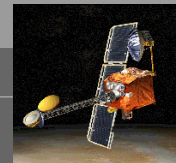
# Successful Proposal Preparation (cont.)

- Support your assertions
  - Example: *“The design approach for external leakage was not substantiated for the specified operating temperature range.”*
- Don't forget boilerplate/fine print
  - Often includes critical information
- Identify key personnel as well as roles/responsibilities
- Identify areas you offer a competitive advantage



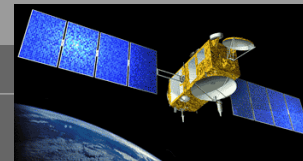
# How to Win a Competition

- Have the lowest price/cost
- Have the best value with a reasonable price
- Meet the requirements of the sponsor
- Be organized
- Write a clear and concise quote/proposal
- Include all required information
  - All proposal volumes
  - Forms
  - Certifications
- Solid financial responsibility
- Propose a strong/experienced/available team
- Strong past performance



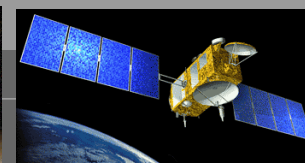
# How to **Lose** a Competition

- Deliver proposal late
- Too expensive
- Critical weakness
- Throw something together last minute
- Fail to understand what the customer wants
- Take exception to requirements
- Fail to comply with the requirements



# How to **Lose** a Competition (cont.)

- Fail to provide all requested information
- Fail to substantiate your assertions
- Put responses where evaluators can't find them
- Unrealistic schedules, pricing or technological advances
- Assume you can get well later
- Don't take advantage of debriefing process



# Selection Techniques

**Directed  
Procurements**

**Non-Competitive**

**Competitive  
Evaluated**

**Competitive  
Low Bid**

# Basic Elements of a Solicitation

**SOLICITATION INSTRUCTIONS**  
General / Administrative Issues  
Cost/Price Information Required  
Management Information Required  
Technical Information Required

**SUPPORTING DOCUMENTS**  
Specifications  
Drawings  
Documentation Requirements

**SPECIMEN CONTRACT**  
Technical Requirements  
Deliverables  
Period of Performance

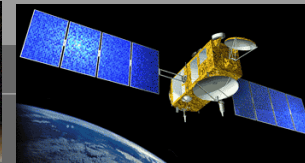
**TERMS AND CONDITIONS**

# Solicitation Process



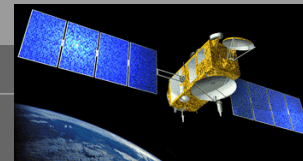
# Initial Internal Activities

- Establish team with required skills/expertise
- Review proposal evaluation criteria
- Review requirement documents
- Review the source list
- Establish that a Conflict of Interest DOES NOT exist
- Adhere to security requirements
- Participate in pre-proposal conferences
- Respond to questions/requests for clarification



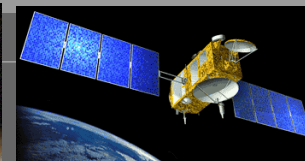
# Team Activities After Receipt of Proposals

- **Determine adherence to requirements**
  - Page limitations, format, number of copies, mandatory qualifications, minimum requirements, complete proposal, certifications, etc.
- **Determine responsiveness to requirements**
  - Sufficiency of information for evaluation is made
- **Non-responsive proposers are informed of decision**
- **Establish schedule for evaluations**
- **Evaluation against criteria begins**



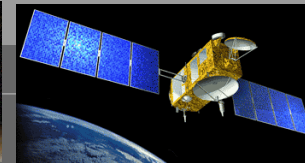
# Evaluation Methodology

- Proposal evaluation process is not a secret
  - Evaluations are performed against established criteria and processes
- Each solicitation is unique
  - Criteria, point allocation, selection method, etc.
  - Written proposal vs. oral proposal
- Strengths and weaknesses developed by criteria
  - Team reaches consensus on degree that requirements are met
- Past performance may be checked
- Cost examined for reasonableness
- Initial findings establish a competitive range
- Potential site visit to review/verify proposal



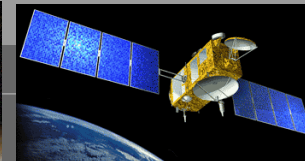
# Final Steps in Evaluation Process

- Compile final findings
- Present results to Source Selection Official
  - Potentially negotiate with all viable proposers prior to selection
- Initiate negotiations
- Contracts are signed
- Proposers are debriefed
  - Identify strengths and areas for improvement



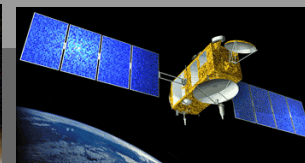
# Proposer Responsibilities

- **Determine if you can perform the required task**
  - Can you perform the work, meet delivery, is your price/cost competitive, what is your competition, can you prepare a proposal?
- **Understand the solicitation documents**
  - Carefully review proposal instructions, attend the pre-proposal conference, ask questions
- **Establish a proposal preparation schedule**
  - Allow time to write the proposal, obtain cost/price data, obtain internal approval, print and deliver your proposal



# Final Reminders

- **Include all required information**
  - All proposal volumes
  - Forms
  - Certifications
- **Submit proposals on time**
  - Don't let your hard work go to waste due to a late delivery
- **Take advantage of the debriefing process**
  - Learn more about your strengths and where improvements can be made



Thank you.

